

EAA Chapter 569

NEWSLETTER

March 1996



President's Message

by Roger Aspegren

We had a great turn-out for our February meeting, and boy, did we have a lot of things to talk about. Thanks Ray for sharing the thrill (and maybe just a little anxiety) of your first flight of the Glasair, N505YR. We all envy you. By the way, do you know what Ray's N number means? Fifty before he could afford it, and five years to build...clever, huh?

Neil Vernon did a nice job of explaining what the ACE Academy does. Where was all these programs when I was a kid? We will let you know about making these kids young eagles at a later date. It will probably be planned for some evening during the Academy week.

Our Young Eagle Day will be Sunday the 9th of June

Doug Hill held a painting workshop at Hill Aero on the 10th of February. Thirteen people attended. This is a preview to what we have planned ever Saturday morning during the Summer months. More info will be announced on this soon.

Our Young Eagle Day will be Sunday the 9th of June. We will have it at Shoemaker's airport, and hopefully the weather will cooperate a little better this year. We plan to publicize this event through the media and the schools. Remember, we pledged to fly 180 eagles this year.

The excitement is building on the EAA "Coming Home" Tour of the B-17. Mark

(Continued on page 5)

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MEETING: Tuesday, March 5, 1996

LOCATION: York Municipal Airport
N40 53.7 W97 37.4

TIME: Meet at Cobbler's Inn by
6:30 PM to Carpool to York

PROGRAM: We will be meeting with the York Chapter 1055 this month. They will have a couple of homebuilt airplanes on display and we will discuss the upcoming visit of the EAA's B-17 bomber to the Lincoln Municipal Airport.

EXPERIMENTAL AIRCRAFT ASSOCIATION

Wittman Airfield • Oshkosh, WI • 54903-3086 • Phone (414) 426-4800

Editor's Corner

by Mark Turner

Last month I reported on my efforts to begin building an airplane. Several people asked what I was planning to build. I will be building an AeroCanard. This looks like an overgrown Long-Ez. It is a 4-place canard type airplane. This month's builders report: stalled for another month.

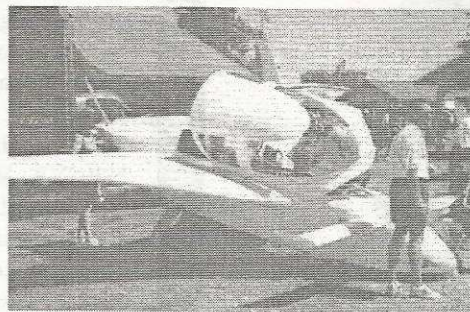
The newsletter has grown to 8 pages this month. I will need more stories from you the Chapter members to keep the newsletter at this size. I hope that the picture quality will be better this month, I found a copier that has a "photo screen" function that should make things better.

There is going to be a lot of activity this summer with the Young Eagles, B-17, Oshkosh, builders workshops, etc. I am looking forward to spending quite a bit of time this summer on aviation related projects.

The B-17 coming to Lincoln is the big news for the

Chapter right now.

This sounds like it is going to be a great event! Everyone in the chapter will need to participate in this event to make sure it is successful, but this event is going to be so much fun it won't even seem like work.



See you all in York on the 5th.

To Loop or Not to Loop?

by Terry Carlson

"Did we make it that time?" I shouted above the wind and engine noise. "Darn, I don't know, I can't tell. Wait a minute, ah,-- nah, didn't get it!" Wes shouted back. "Nope, she fell over! Darn it, I think we need about 65 more horsepower!" I yelled. "Yea, I know!" Wes growled as we pulled out of a very steep dive. This had been our third attempt.

It was a hot summer afternoon with not a cloud in the sky. We were attempting to 'loop the loop' over our hometown of Craig, Nebraska. I had just turned 16, and my best friend Wes had brought his 1941 Taylorcraft home for the weekend. Wes was a partner on the plane with four other guys from Omaha. He could afford it because he had a "great job" working as a lineboy for Tony Bonacci at the North Omaha Airport. I didn't have much of a job, so I couldn't afford to buy in with him. But, he knew I loved to fly too, so I was in the seat beside him on a lot of the days that he flew. Today, he was giving me a birthday present; an attempt at a loop in his blue bird.

We were both sixteen, and of course we both loved flying. He had just earned his Student Pilot License about a month before, and I was still working on mine. On this day, we were attempting to do an inside loop, and with only 65-horses up front we were having a tough time pulling it off. We knew that as a Student Pilot he shouldn't have a passenger along, but in 1961, nobody was really looking. We spent many hours together in that Taylorcraft. In retrospect, I wouldn't do it again.

Anyway, on this third try, when we were close to the top

of the loop, we ran out of horse-power and she fell over on her back again. It was a little scary seeing Main Street coming up fast, but he pulled her out of the dive and leveled off. "Want to try it again?" Wes shouted. "Sure! But this time try harder!" I yelled back, and he proceeded to climb to gain some altitude. After reaching about 4,000 AGL, which by the way takes quite a while in a T-Craft, he put her in a shallow dive again. Building up speed, we were "really cruising" when he pulled the wheel back and started to climb to the top of the loop again. We got close to the top for the fourth time, and before we knew it we were in a dive again. "Did we make it that time?" he yelled as we spiraled down. "I can't tell, but I think so!" I yelled back. I really wanted to think we did. "Hey, I know, let's just say we made it, O.K.!" he laughed. "O.K. by me, I'm getting dizzy anyway!" I shouted. He pulled her out of the dive, leveled off and headed back home to his alfalfa field airstrip two miles west of town. We landed in the hay field, taxied to the barn and quit for the day.

For us, it had been just another hard day at the office, and we were ready for a bottle of Pepsi Cola with a bag of Planter's Peanuts. My birthday had been a good excuse for Wes to bring the plane home, and we were enjoying every minute.

Whether we made the loop or not has always been a question. The real answer is a closely guarded secret among those watching from Craig's Main Street below. I can't help but think that we did.

Technical Counselor Report

By Doug Hill

An item came up at a recent meeting's business I think should be emphasized to our membership. One of our member builders asked about recommendations for a good contract welder to accomplish a tubing repair on his home built project. From this dialog I would like to suggest some thoughts that might benefit others with different repair situations.

The following are some items I feel, as technical counselor, should be mentioned:

- 1 No one individual has all the answers when it comes to building an aircraft and I think our member made a wise decision to draw from the experience of our group for feedback on possible solutions. Our cumulative knowledge should help him and it may be able to help you with brainstorming a solution to a pesky problem or simply increasing your general knowledge about an engine or airframe system.
- 2 This repair, like many repairs or alterations, has a two part requirement. The most obvious is a recommendation of an experienced welder who can melt the metal together with strength, accuracy and beauty. This part was simply handled by discussion from the floor and several craftsmen were suggested.
- 3 Less obvious and more important, a point that is often overlooked, is accomplishing proper "engineering of the repair". In this case of a tubing weld we most times look for a contract welder with experience to accomplish this engineering at the same time. You select a contractor based on his experience and past results and you trust that he has sufficient experience with your requirements to not only weld the metal but also "engineer the repair" so that when it is finished you are pleased with the results and sage with the structure. Comments from the floor indicate that most professional welders choose not to weld on aircraft parts. This reluctance by the professional should alert you. I know that it is not the welding that they hesitate with, it is the knowing that the job they have done is safe, having a working knowledge of "engineering the repair". Unless your chosen contractor is experienced with welding major repairs/alterations to aircraft steel truss structures he should not be comfortable making this repair for you. You as the builder of this aircraft are in charge of the engineering responsibility and handing it off to the unqualified welder puts both of you at unnecessary risk when you strap yourself into the finished product.

The point to emphasize here is "engineering the repair". Don Shoemaker discussed this with our builder when he said, "... make sure the stress of the tube butt weld is transferred into a splice or gusset to provide adequate strength".

Remember that as the builder you can do anything you

want experimentally and hang yourself in the air by it, but you are also responsible for the results. You are acting as the engineer that develops the plan to accomplish the repair/alteration so it meets appropriate strength and safety standards.

You are the mechanic that performs the repair/alteration to these engineering directions in a airworthy manner. And you are the inspector that verifies the mechanical work and materials conform to your select engineering standard.

When you purchase your plans/prints/kits you are buying the strength and safety substantiation that was accomplished at development by the engineer involved with the initial designing of the project. A lot of the older designs may have been engineered by mechanical verification "pull tested", or based on known industry standards, or compared to like approved applications, or drawn from public engineering sources, or any variety of proven results; and then substantiated with years of use to verify safety and reliability. Today you can be assured that the modern kits have been engineered and stress analyzed to substantiate strength and safety.

I embrace the direct approach to solutions that experimental aircraft enjoy and I loath the cumbersome bureaucracy of FAA for certification but there are safety lessons to be learned here from the FAA inspection requirements. If your KitFox or Kolb were a type certified aircraft these "major repairs and alterations" would require a FAA form 337 which mandates engineering substantiation documented as "approved data". For type certified aircraft the mechanic must follow the directions of the approved data and the IA completing the inspection must verify conformity to the approved data. Remember, you as the home builder, are assuming all of these roles. If you accomplish your own repair/alteration without engineering substantiation of select a contractor that hesitates to "weld an airplane part", then you may be bypassing the previous existing engineering and compromising the safety and airworthiness of your pride and joy.

You, the home builder, can deviate, modify, change, or do anything you want with your aircraft creation. This is the beauty and freedom of the Experimental category. I just want to remind you that in my opinion I don't think anyone in this local chapter has the engineering or aeronautical background to independently attest to material or process strength values and to make a determination of safety standards for repairs or alterations without substantiation by some known source of engineering data.

When I, acting as technical counselor for this chapter, am asked to assist with an inspection I can not and will not tell you

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The 'Aluminum Overcast'

This airplane — B-17G-VE, serial number 44-85740 — was delivered to the U.S. Army Air Corps on May 18, 1945. Although delivered too late to see action in World War II, the airplane has an interesting history.

Stripped of military hardware and declared surplus in November 1945, it was purchased by its first civilian owner on June 17, 1946. Pat Brandenburg of Metal Products in Amarillo, Texas, paid \$750 for the airplane. At today's prices, \$750 doesn't even come close to paying for the fuel needed to fill the airplanes tanks!

On August 2, 1947, the airplane was sold to Charles Winter of Miami, FL, who in turn sold it to Joe A. Lopez Jr., of Melbourne, FL, on August 16, 1947. Lopez intended to use the B-17 to haul cargo in the Caribbean. In preparation for that duty, the airplane's original floor and radio compartment were removed and replaced.

By 1949, Aero Service Corporation of Philadelphia had purchased the airplane and converted it for use as a high-altitude camera platform and survey aircraft. During the next 12 years, the airplane performed mapping operations over Arabia, Libya, Lebanon, Iran, Laos, Vietnam, Cambodia, Egypt and Jordan, logging more than 1 million miles on the airframe!

In 1962, Chris Stoltzfus and Associates of Coatsville, PA, purchased the airplane and outfitted it as an aerial sprayer. It was inactive for the next several years, however, before being sold to Dothan Aviation, Inc. of Dothan, AL, in 1965. The airplane was then utilized in a variety of roles including pest control, forest dusting and fire fighting throughout the southeastern U.S.

When Dothan Aviation went out of business in 1978, Dr. Bill Harrison purchased the airplane. Dr. Harrison and several



others formed the corporation "B-17s Around the World." Their intent was to restore and maintain the B-17, now known as "Aluminum Overcast," as a flying display of aviation heritage. Due to the overwhelming financial responsibility of the undertaking, the Corporation donated the airplane to the EAA Aviation Foundation in 1981, with the provision that restoration be continued as time and money permitted. Since then, the airplane — which remains in airworthy condition — has appeared at numerous air shows and aviation events all over the country. Money raised from tours and air show appearances are used to offset operating and restoration costs.

Currently, the airplane is painted in the colors of the 398th Bomb Group, commemorating B-17G #42-102516, which was shot down on its 34th combat mission over Le Manior, France, on August 13, 1944. The 398th Bomb Group donated the funds to have the airplane painted.

"Playing Through"

from The Internet

Golf can be a dangerous game requiring great concentration. This was evident after four golfers were so intent on their game that they didn't notice a small airplane heading towards them for an emergency landing. The Piper Arrow, with a student pilot and his instructor on board, came down on the first fairway of the Boca Raton Municipal Golf Course because of engine trouble. To avoid hitting the golfers, the plane had to veer off and then impacted with a palm tree. It landed safely,

but extensive damage was done. "Everything would have been OK if those damn golfers would have moved out of the way," said instructor Scott Slinko. "We were coming down and they weren't moving, so I went for the tree."

"Concentration -- that's the name of the game. That's what Jack Nicklaus said," golfer Irv Brown told the Fort Lauderdale Sun-Sentinel. "We were concentrating."

B-17 Historical Society

Of all the great American airplanes of World War II, none is more celebrated than the B-17 "Flying Fortress". It remains legendary today and invokes images of great courage and strength.

You can help preserve the B-17's glorious history by becoming a member of the EAA Aviation Foundation's "B-17 Historical Society." The society promotes an appreciation of the importance and accomplishments of our aviation history and the B-17 in particular.

Anyone may apply for Society membership. They need not be a pilot or military veteran, but you do need to be a current EAA member.

Have you ever dreamed of flying a B-17? Now you can. EAA members can join the Historical Society at the Flight Crew level and enjoy the ultimate experience of flying the aircraft (under supervision) while it is here in Lincoln. Benefits include; certificate of membership, B-17 Historical Society nylon flight jacket, one 8x10 photo of you at the controls and a B-17 newsletter.

Chapter 569 will have 54 Historical Society memberships available during the "Coming Home" tour visit in Lincoln, July 4-8. Doug Prange is the B-17 Historical Society Chapter Chairman and will be coordinating memberships and scheduling B-17 flights.



Young Eagles Report

Chapter 569 will be holding its annual Young Eagles Day on Sunday June 9th at Shoemakers Airfield in Denton.

The Chapter will also be holding a barbecue that day for members, guests and Young Eagles.

We will need pilots who can fly Young Eagles and have airplanes available that day. Please contact Rick Cooper if you can help.

The chapter has pledged to fly 180 Young Eagles in 1996. We are hoping for a good turnout on Sunday the 9th. If anyone in the chapter flies a Young Eagle, please contact Rick Cooper for the paperwork necessary to get proper credit for the flight.

Chapter 569 would like to acknowledge the following chapter members who were listed in the 1995 Honor Roll for flying 10 or more Young Eagles in 1995:

Jeff Clausen • Steve Lukehart
Don Shoemaker

**Remember, if you have time to fly, you
have time to fly Young Eagles**

CONGRATULATIONS

Our congratulations go to these Lincolniters for obtaining the following licenses:

Benjamin Church	Commercial
Chandra Barr	Instrument
Lawrence McCoy	Instrument
David Roberts	Instrument

WELCOME

Chapter 569 would like to welcome the following new members:

Troy Huffman • Larry Glabe

Give them a big welcome when you see them!

(Continued from page 1)

Lucey has been very busy and is making good progress. The response from all of you at the last meeting was very satisfying. As I promised, everyone who has not picked a committee to work on by the March meeting will be assigned to one by the board. This is a total member effort. Personally I am very excited and can't wait to get a ride on this beautiful bird, my favorite warbird.

Don't miss this March meeting. Let's get acquainted with our neighbors over in York. I understand they will have a couple of nice homebuilts for us to look over. See you there.

(Continued from page 3)

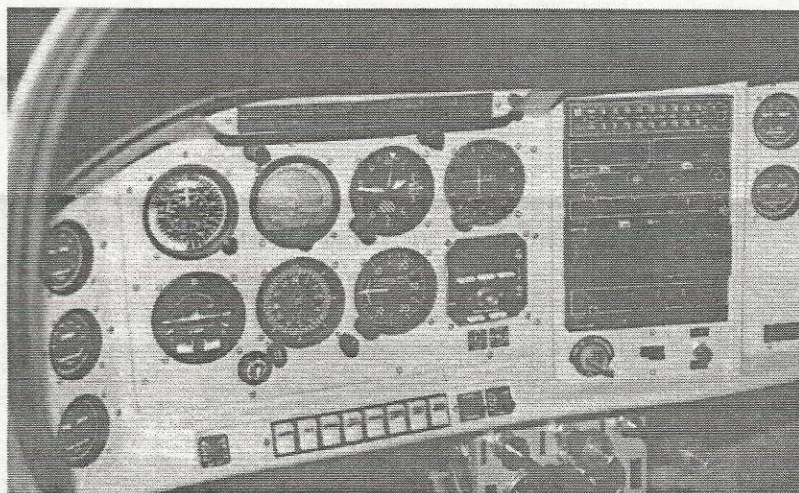
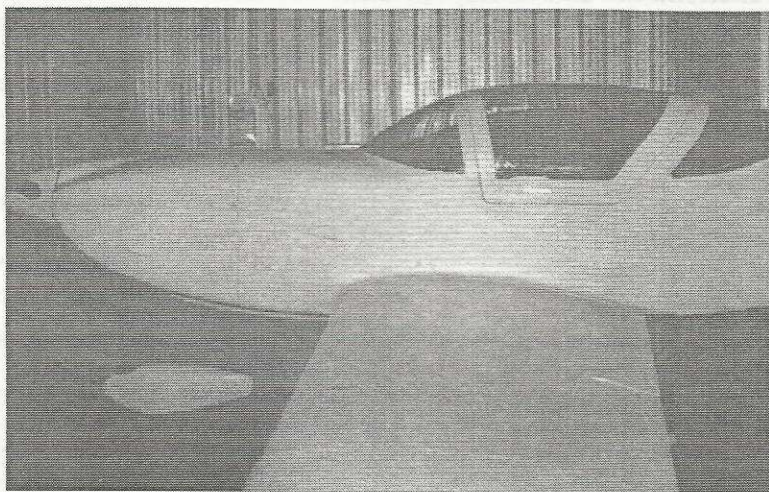
how to repair or alter your project. I will however provide my experience as a FAA licensed inspector to assist you in offering solutions in substantiation your repairs/alterations with known sources of engineering. I hope this information helps you with selecting and working with your contractors. I will try to provide more information on this topic and some sources for "Engineering Your Repair Approved Data", at a later time.

A Glasair Takes to the Air

By Mark Turner

Ray Supalla's Glasair IIS-FT flew for the first time on September 4, 1995. His tail number tells a story, N505YR was chosen because the airplane was to be completed at age 50 and was to have taken 5 YR's to build... Well, the final FAA inspection took place within that timeframe, but weather caused the first flight to take place at age 51.

I visited with Ray at his hangar in Crete recently and talked about his building experience. Ray has over 3750 hours building N505YR and says he still has a lot to do. The airplane is currently in primer as the flight testing proceeds. The interior is being installed as weather keeps the plane in the



hangar. As of this writing Ray has 17 hours on the airplane with 25 hours required for initial flight testing.

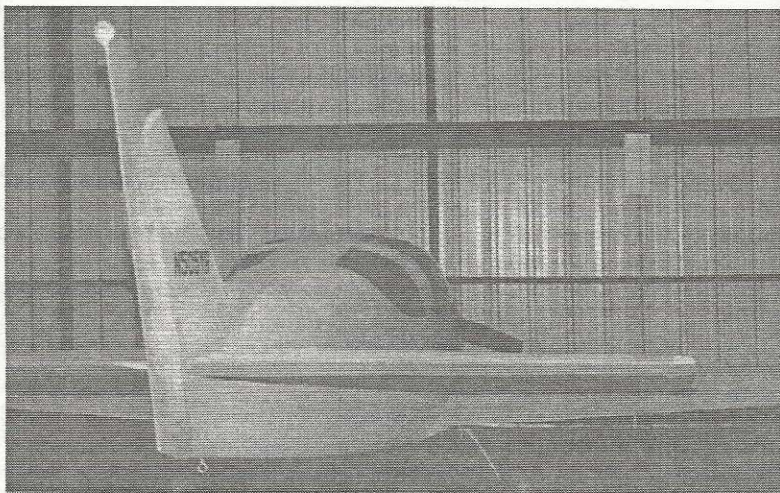
This airplane has a better panel than most factory built airplanes. Ray has installed an autopilot, GPS, and digital engine instrumentation.

Ray had originally decided to build an RV-6A homebuilt. This is an all aluminum 2-place airplane. He attended the 1989 Oshkosh show with the intentions of placing an order for the RV-6A but his wife pointed out the Glasair and said "I think you should build this airplane". Why can't we all be this lucky?

N505YR is equipped with a freshly rebuilt Lycoming O-320 engine driving a Hartzell constant speed propeller. This gives the airplane a 205 MPH cruise speed, consider for a moment that this is the same engine that drives a C-172 along at barely 125 MPH. This is one fast airplane!

Ray is currently finishing the interior, working out a few kinks in the fuel flow, and flying off the last few hours of the initial flight testing period. Then it's airplane rides for everyone.

We can wish can't we?



First Saturday Workshop

by Mark Turner

The Chapter held its first Saturday Workshop on February 10th. This workshop was hosted by Doug Hill of Hillaero. After considerable debate regarding the starting time, the workshop was attended by around 13 members. Doug gave a talk on aircraft painting and showed a videotape. Doug stressed the importance of personal safety equipment considering the toxic nature of most of the materials used in painting an aircraft.

I think that I can speak for all those in attendance when I thank Doug for the time and effort put into this workshop. Doug has offered to assist any member who needs help prior to a painting project. Doug Hill is a great resource for this chapter to have.

We will be having more workshops over the summer. Roger would like to have a mini-workshop every Saturday over



the summer months. More information will be posted regarding times and locations.

A True Airplane Story

by Lester Christiansen

The little airstrip where I keep my Cessna 120 is located near a "normally" small creek. Recently, due to a 7" rain upstream, it was covered with two feet of fast-moving water. Our hangars were under even more water when my wife and I went out to inspect our pride and joy.

A farmer was working with a wagon and team of mules to get farm machinery up and out of the water. I quickly bargained with him to tow my plane out of the water and up a hill for tiedown. Since the wind was blowing a gale, I persuaded him to tow me on the end of a 100-foot rope to give me leeway to maneuver the plane and keep it headed into the wind.

Iris and I climbed aboard and off we went. Apparently I had misjudged the wind velocity, as we had only gone a few yards when we became airborne. The mules thought the devil was after them, and they started on a dead run. The faster they ran, the higher we went. To maintain directional control, I started the engine, but forgot that by doing so it would take us even higher. You can imagine my consternation when I looked down and now found the wagon, the farmer, and both mules hanging on the end of the 100-foot rope, and approximately 50 feet off the ground.

I finally gathered my wits about me enough to trim the plane for level flight while I decided what to do. I knew if I landed, it would either kill them on impact or maybe even worse, drag them to death.

*The mules
thought the devil
was after them,
and they started
on a dead run.*

Fortunately for all of us, the wind continued to increase in intensity. On looking down again, I found our ground speed to be nearly zero. This gave me an idea. I gently eased the plane down until its load was once more on terra firma. You can imagine the relief to me, and probably even more to the farmer and the mules. The mules apparently did not want to risk a repeat performance, and laid down and refused to be moved. Since I could not go forward despite full power, this left me only one alternative. I gently eased the plane down to the ground.

Once more, we lucked out. We had landed with the full-powered propeller only two feet short of a high woven-wire fence at the end of the pasture. I jumped out and started tying my side down, meanwhile hollering to Iris to tie hers. Apparently, due to the noise of the wind and the motor, she did not hear me. I was over on her side tying it down when I awoke from the most king-sized dream I have ever had.

This actually happened to me on the night of February 13, 1985. Iris tells me I woke her yelling for her to tie it down before it tipped over. Apparently, my arms and legs were doing their part too, as I was kicking and flailing like mad.

Yes, truth is sometimes stranger than fiction.

EAA Chapter 569

March Newsletter

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Chapter Notes

- **The Chapter meeting this month will be at the York Municipal Airport.** We will meet at The Cobbler Inn and leave at 6:30 PM to travel to York.
- **The Coming Home Tour will be in Lincoln July 4-8** - If you have not volunteered for a committee yet, Roger will assign you to one! Every chapter member needs to help with this project.
- **The Chapter is still looking for a cabinet to house our library.** We would like to find a nice cabinet that can be kept in the meeting room at the Cobbler Inn. If anyone has a cabinet to donate to the Chapter please contact Roger Aspegren
- **EAA is offering books at a discount to chapter members.** Orders and payment needs to be given to Mark Lucey at the March meeting.
- **Parts is Parts.** Mark Lucey is starting a building project and is looking for the following items: AN hardware, Instruments, Wood, Glue. If anyone can help Mark with these items call him at: 484-8460

Coming Plane Stuff

March 5

Chapter 569 Meeting • 6:30 PM
Meet at Cobbler Inn travel to York Municipal

March 20

Pilot Safety Seminar • 7-10 PM
Southeast Community College

June 9

Young Eagles Day - Shoemakers Airfield

July 4-8

The 1996 Coming Home tour stops in
Lincoln, NE

August 1-7

Oshkosh '96 • Oshkosh, WI